

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 20, 24-29, 37, 38 and 93-95 are pending in the present application with Claims 20, 24, 26-29, 37, 38 and 93-95 amended by the present amendment.

In the outstanding Office Action, Claims 20, 24-27, 29, 37, 38 and 93-95 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav et al in view of Eisenhandler; Claims 28, 29 and 37 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav et al in view of Ogawa et al; and Claims 20, 24, 25 and 93-95 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav et al in view of Kremen et al.

Claims 20, 24-27, 29, 37, 38 and 93-95 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav et al in view of Eisenhandler. This rejection is respectfully traversed.

Amended independent Claim 20 is directed to a data transfer control device that establishes a connection in a local home network, transfers IP based audio/visual data through a communication path reserved for receiving the IP based audio/visual data from a transmitting node, and commands a non-IP receiving node to receive the IP based audio/visual data using a communication protocol depending on the local home network. Further, the communication protocol of the local home network is different from the communication protocol of the global IP network such that the non-IP receiving node and the transmitting node cannot directly communicate with each other, support for which is found in the originally filed specification at least in Figure 1 and at page 35, lines 3-9. Independent Claims 28, 29 and 93-95 include similar features.

In a non-limiting example, Figure 1 shows a home network including a transmitting terminal 1, a first AV control terminal 2, a first half gateway 3, a second half gateway 4, a

second AV control terminal 5, a receiving terminal 6, a first 1394 bus 11, and a second 1394 bus 12. The transmitting terminal 1 and the receiving terminal 6 are non-IP terminals (also referred to as 1394 terminals), that is, terminals that only understand the 1394 protocol. The receiving terminal 6 does not have an IP address assigned to it, and accordingly IP packets cannot be addressed to the receiving terminal 6 (see the specification at page 35, lines 3-16).

Figure 1 shows AV control terminals 2 and 5 by which a video transmission and reception control application is implemented. The AV control terminals 2 and 5 understand both the IP protocol and the 1394 protocol of the local bus, and control nodes that do not understand the IP protocol on the local bus using the 1394 protocol (see the specification at page 38, line 19, to page 39, line 12). By using the AV control terminals it is possible for a user to carry out exchanges of data with terminals located on a remote 1394 bus even when transmitting and receiving terminals are not IP terminals (see the specification at page 39, lines 3-7). To effect this, the AV control terminals establish a channel to set up an end-to-end connection between a receiving terminal 6 and a transmitting terminal 1, and the AV control terminal 5 commands the receiving terminal 6 to receive the data transmitted through the channel (see the specification at page 45, lines 14-31).

As an advantage, it is possible to carry out control between AV terminals on arbitrary 1394 buses without requiring a long distance 1394 bus transfer or a complicated 1394 bridge protocol which otherwise are typically drawbacks of 1394 buses (see the specification at page 48, lines 6-10). Further, it is possible for AV control terminals to communicate using the IP protocol while the transmitting and receiving terminals do not use the IP protocol (see the specification at page 48, lines 11-17).

In contrast, Keshav et al merely discusses a processing system 100 within which communications occurs by a connection between two suitably programmed circuits or devices within the processing system 100 (see column 5, lines 61-65 of Keshav et al). The

outstanding Office Action states “Keshav teaches a commanding unit configured to command the transmitting node to transmit the information data through the first connection.”

However, that discussion of Keshav et al is different from Claim 1, which includes a commanding unit configured to command the non-IP receiving node to receive the IP based audio/visual data.

Further, Eisenhandler merely discusses a network interface that identifies a device as belonging to either a clustering facility or a communications medium, and also does not teach or suggest the features of the independent claims.

Moreover, independent Claim 28 further distinguishes over Keshav et al for the following reason. Claim 28 is similar to Claim 20 but further recites that a communication path is established between a data transfer control device and a global IP network or transmitting node belonging to an upper logical network of the global IP network, in addition to a connection established in a local home network. Further, a data format of IP based audio/visual data is converted to a second data format depending on the local home network.

In a non-limiting example, Figure 10 shows an MPEG-over-IP/MPEG-over-1394 conversion unit 1205 that converts MPEG frames received from the Internet 1102 in MPEG-over-IP format into MPEG-over-1394 format (see the specification at page 51, line 34, to page 52, line 2). As an advantage, a non-IP receiving node can properly receive IP based audio/visual data in a format suitable to the non-IP receiving node.

In contrast, Keshav et al merely discusses communication between a connectionless-oriented server and client programs using virtual circuits, and does not teach or suggest the features of Claim 28.

In addition, Claim 29 further patentably distinguishes over Keshav et al for the following reason. Claim 29 is similar to Claim 20 but further recites an encoding/decoding

unit that encodes and decodes IP based audio/visual data received through a communication path established by an establishing unit.

In a non-limiting example, Figure 9 shows that MPEG decoding is carried out at an MPEG decoding unit 1805 and raw video data is transmitted through an isochronous channel in the 1394 bus 1104 (see the specification at page 56, lines 19-18 and Figure 17).

As an advantage, load is reduced in the receiving terminal 1105 by concentrating high level functions such as MPEG decoding in the AV control terminal 1103 (see the specification at page 56, lines 29-32).

In contrast, Keshav et al do not teach or suggest these features.

Further, Claim 37 patentably distinguishes over Keshav et al for the following reason. Claim 37 is directed to a relay device in which a receiving unit receives a control message requesting an encoding or decoding of received data in a format depending on a local home network. Also, a transmission unit encodes or decodes data received from a global IP network before transmitting the data to the local home network. These features are similar to the features of Claim 29.

Also, Claim 38 patentably distinguishes over Keshav et al for the following reason. Claim 38 is directed to a control device that collects attribute information of transmitting and receiving nodes on the local home network, and notifies the collected attribute information to a device on a global IP network using a network layer protocol not dependent on the local home network.

In a non-limiting example, Figure 1 shows an AV control terminal that checks resources and services (such as nodes) on the local bus, and communicates the obtained results with other AV control terminals (see the specification at page 38, lines 22-25).

As an advantage, devices on the global IP network can acquire the attribute information on nodes in the local home network in a suitable network layer protocol.

In contrast, Keshav et al does not teach or suggest these features. In addition, Eisenhandler also does not teach or suggest these features.

Accordingly, it is respectfully submitted independent Claims 20, 28, 29 and 93-95 and each of the claims depending therefrom patentably distinguish over Keshav et al and Eisenhandler.

Claims 28, 29 and 37 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav et al in view of Ogawa et al. This rejection is respectfully traversed.

As discussed, Keshav et al does not teach or suggest the features of the independent claims. Further, Ogawa et al merely discusses a network data converter that accomplishes file format translation, and does not teach or suggest the features of the independent claims. Accordingly, it is respectfully requested this rejection be withdrawn.

Claims 20, 24, 25 and 93-95 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keshav et al in view of Kremen et al. This rejection is respectfully traversed.

As discussed, Keshav et al does not teach or suggest the features of the independent claims. Further, Kremen et al merely discusses a data conversion system and also does not teach or suggest the features of the independent claims. Accordingly, it is respectfully requested this rejection also be withdrawn.

Consequently, in light of the above discussion and in view of the present amendment this application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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